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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,437	10/25/2004	Hiroshi Takahara	259686US2PCT	3978

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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER	
CHOWDHURY, AFROZA Y	
ART UNIT	**PAPER NUMBER**
2629	

NOTIFICATION DATE	DELIVERY MODE
04/02/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary	Application No.	Applicant(s)	
	10/511,437	TAKAHARA, HIROSHI	
	Examiner	Art Unit	
	AFROZA Y. CHOWDHURY	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 January 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1, 4-6, and 13-28* is/are pending in the application.

4a) Of the above claim(s) *5,6,16 and 19-28* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4,13-15,17 and 18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *1/30/2008, 12/12/2007, 10/15/2007, 9/10/2007*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Claims 5, 6, 16, and 19-28 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected **Groups II-III**, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on **January 20, 2008**.

2. Applicant's election without traverse of **Group I** in the reply filed on **January 20, 2008** is acknowledged.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "**aggregation circuit**' and "**selection circuit**" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate

changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 15 and 17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claim 15, "**generating a belt-like display area**" and "**shifting the belt-like display area**" are not described in the specification originally.

Regarding claim 17, there is no support in the specification for "**selection circuit**".

6. Claims 1, 4, 13, and 14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding claim 1, **"...aggregation image data input to the EL display apparatus and determining a period to turn off the switching element according to an amount of the aggregated data"** is not described in the specification. There is no support for "**aggregation image data**" in the specification. What is aggregation image data?

Regarding claim 4, **"...an aggregation circuit configured to aggregate image data input to the EL display apparatus..."** is not understood from the specification. There is no support for "**an aggregation circuit**" in the specification. What is an aggregation circuit?

Regarding claims 13 and 14, there is no description for "**aggregated data"** in the specification.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1, 4, 13-15, 17, and 18 rejected under 35 U.S.C. 103(a) as being unpatentable over **Tsuda et al.** (US Patent 7,321,353) in view of **Kurabayashi et al.** (US Patent 6,105,045).

As to claim 1, Tsuda et al. discloses a drive method of an EL display apparatus that comprises

a switching element (fig. 25(111)) which turns on and off a current path between a driver transistor (fig. 25(113)) and an EL element (fig. 25(114)), in each pixel (col. 30, lines 25-50), the drive method comprising:

data input to the EL display apparatus (fig. 29, col. 39, lines 45-60); and

deterrmining a period to turn off the switching element according to an amount of the data (col. 42, lines 50-58).

Tsuda et al. does not specifically teach aggregating image data input to the EL display apparatus.

Kurabayashi et al. teaches aggregate area display unit (fig. 2, col. 6, lines 1-17, 45-49, as best understood).

Therefore, it is obvious to one skill in the art at the time of the invention was made to incorporate the idea of Kurabayashi et al. of using aggregate unit to aggregate image data into the display device of Tsuda et al. to make an EL display apparatus with high resolution images and reduced power consumption.

As to claim 4, Tsuda et al. teaches an EL display apparatus that controls brightness of a screen using a ratio between non-display and display areas on the screen, the EL display apparatus comprising:

a display area in which EL elements and driver transistors that drive the EL elements are formed in a matrix (fig. 1, 29, 58, col. 30, lines 14-20);

gate signal lines configured to transmit voltages that turn on and off the EL elements in each pixel row (col. 39, lines 50-54);

a gate driver circuit (fig. 29(203), col. 41, lines 50-51) configured to drive the gate Signal lines (fig 1, col. 30, lines 14-20;

an circuit configured to supply image data input to the EL display apparatus (fig. 29, col. 39, lines 45-60); and

a control circuit (fig. 29(205)) that controls a timing or a period to generate a start pulse signal for the gate driver circuit (col. 39, lines 32-38).

Tsuda et al. does not explicitly teach an aggregation circuit configured to aggregate image data input to the EL display apparatus.

Kurabayashi et al. teaches aggregate area display unit (fig. 2, col. 6, lines 1-17, 45-49, as best understood).

Therefore, it is obvious to one skill in the art at the time of the invention was made to incorporate the idea of Kurabayashi et al. of using aggregate unit to aggregate image data into the display device of Tsuda et al. to make an EL display apparatus with better quality images and reduced power consumption.

As to claim 13, Tsuda et al. (as modified by Kurabayashi et al.) teaches a drive method of an EL display apparatus wherein the aggregated data (col. 6, lines 1-17, 45-49 in Kurabayashi et al.) corresponds to power consumption consumed in the display screen of the EL display apparatus (col. 43, lines 20-23, col. 49, lines 45-58, in Tsuda et al.).

As to claim 14, Tsuda et al. (as modified by Kurabayashi et al.) teaches a drive method of an EL display apparatus where the aggregated data is obtained by a processing of weighting the image data (col. 6, lines 1-17, 45-59, in Kurabayashi et al.).

As to claim 15, Tsuda et al. (as modified by Kurabayashi et al.) does not explicitly teach a drive method of an EL display apparatus comprising: generating a belt-like display area on the display screen of the EL display apparatus; and shifting the belt-like display area in a predetermined direction synchronized with a frame frequency.

However, it is an obvious design choice to drive an EL display apparatus comprising: generating a belt-like display area on the display screen of the EL display apparatus; and shifting the belt-like display area in a predetermined direction synchronized with a frame frequency.

As to claim 17, Tsuda et al. (as modified by Kurabayashi et al.) discloses an EL display apparatus comprising:

a selection circuit formed on a substrate on which the EL elements are formed (fig. 1, col. 30, lines 14-20, in Tsuda et al.) ; and

the source driver circuit (fig. 29(204)) outputs a video signal of a first color or a video signal of a second color from a signal output terminal (col. 39, lines 22-31, in Tsuda et al.),

a source driver circuit (fig. 29(204), col. 41, lines 50-51, in Tsuda et al.), wherein

the substrate includes source signal lines to supply the video signals of the source driver circuit to the EL elements (fig. 1, in Tsuda et al.),

the selection circuit includes an input terminal to connect to the signal output terminal of the source driver circuit and a selection output terminal to connect to the source signal line (fig. 58, col. 39, lines 23-31, col. 61, lines 22-32, in Tsuda et al.),

the selection circuit includes a plurality of combinations of one output terminal and a plurality of selection output terminals configured to connect to the one output terminal (fig. 58, col. 39, lines 23-31, col. 61, lines 22-32, in Tsuda et al.), and

the selection circuit applies a video signal of the source driver circuit input to the input terminal of the selection circuit to the source signal line connected to the one or plural of selection output terminals that are selected from the plurality of the selection output terminals (fig. 58, col. 39, lines 23-31, col. 61, lines 22-32, in Tsuda et al., as best understood).

As to claim 18, Tsuda et al. (as modified by Kurabayashi et al.) teaches an EL display apparatus comprising a source driver circuit that applies a gradation signal to the EL elements, wherein the source driver circuit includes a voltage output circuit and a current output circuit (col. 41, line 65 – col. 42, line 14, in Tsuda et al.) .

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AFROZA Y. CHOWDHURY whose telephone number is (571)270-1543. The examiner can normally be reached on 7:30-5:00 EST, 5/4/9.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on 571-272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AC
3/25/2008

/Bipin Shalwala/
Supervisory Patent Examiner, Art Unit 2629